

Title (en)
VEHICLE WHEEL

Title (de)
FAHRZEUGRAD

Title (fr)
ROUE DE VÉHICULE

Publication
EP 4049857 A4 20221130 (EN)

Application
EP 20878249 A 20201016

Priority
• JP 2019192025 A 20191021
• JP 2019192026 A 20191021
• JP 2020039152 W 20201016

Abstract (en)
[origin: EP4049857A1] A vehicle wheel includes two annular rim members disposed on the same axis, at least one annular flange member disposed between the two rim members so as to have the same rotation axis as the two rim members, a securing member that secures relative positional relationship between adjacent members among the two rim members and the at least one flange member, a plurality of body springs that each connects adjacent members among the two rim members and the at least one flange member, and a plurality of linking springs linked to the plurality of body springs so as to restrict relative displacement between the plurality of body springs. At least part of each body spring in the plurality of body springs in a width direction of the vehicle wheel protrudes further to an outer side in a radial direction of the vehicle wheel than the rim members and the flange member, and the plurality of body springs is provided at intervals over an entire circumferential direction of the vehicle wheel.

IPC 8 full level
B60C 3/00 (2006.01); **B60B 9/00** (2006.01); **B60B 9/06** (2006.01); **B60B 11/04** (2006.01); **B60B 21/00** (2006.01); **B60B 21/02** (2006.01); **B60B 21/10** (2006.01); **B60C 7/00** (2006.01); **B60C 7/14** (2006.01); **B60C 7/16** (2006.01); **B60C 7/24** (2006.01)

CPC (source: CN EP US)
B60B 9/06 (2013.01 - CN US); **B60B 11/04** (2013.01 - CN EP US); **B60B 21/00** (2013.01 - CN); **B60B 21/10** (2013.01 - EP); **B60C 3/00** (2013.01 - CN); **B60C 7/00** (2013.01 - CN); **B60C 7/14** (2013.01 - CN EP); **B60C 7/16** (2013.01 - EP); **B60C 7/18** (2013.01 - US); **B60C 7/24** (2013.01 - EP); **B60C 15/02** (2013.01 - CN); **B60B 9/00** (2013.01 - EP); **B60B 21/025** (2013.01 - EP); **B60B 21/026** (2013.01 - EP); **B60B 2900/351** (2013.01 - US); **B60B 2900/711** (2013.01 - US); **B60C 2003/005** (2013.01 - CN EP); **Y02T 10/86** (2013.01 - EP)

Citation (search report)
• [A] US 1180671 A 19160425 - POWERS CHARLES C [US]
• [A] GB 257457 A 19260902 - DANIEL LAR GUVIA
• [A] US 1217461 A 19170227 - KEMMERICH WILLIAM E [US]
• [A] US 850265 A 19070416 - SOWER JACOB D [US]
• [A] GB 198767 A 19230608 - WILLIAM BARRETT, et al
• See also references of WO 2021079834A1

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)
BA ME

Designated validation state (EPC)
KH MA MD TN

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EP 4049857 A1 20220831; **EP 4049857 A4 20221130**; **EP 4049857 B1 20240612**; CN 114555382 A 20220527; US 2022379657 A1 20221201; WO 2021079834 A1 20210429

DOCDB simple family (application)
EP 20878249 A 20201016; CN 202080073646 A 20201016; JP 2020039152 W 20201016; US 202017755048 A 20201016